CLAIMS

1. Data carrier with a core layer and at least one adjacent layer, which is laminated to the core layer, wherein the core layer comprises a holographic data memory in the form of a volume hologram, characterized in that the surface of the directly adjacent layer, facing the core layer includes a roughness before the lamination with the core layer, the roughness causing a wave length shift of the image that is reconstructed by the volume hologram.

2. Data carrier according to claim 1, characterized in that the average roughness for the wavelength shift of the image of at least 20 nm, which is reconstructed by the volume hologram, is equal to about 5 μm to 25 μm.

3. Data carrier according to one of the claims 1 or 2, characterized in that the roughness is stochastically distributed.

4. Data carrier according to one of the claims 1 or 2, characterized in that the roughness profile is regular in the form of a jagged profile.

5. Data carrier according to one of the foregoing claims, characterized in that different areas of the layer directly adjacent to the core layer include different variations of roughness prior to the lamination.

6. Data carrier according to claim 5, characterized in that the areas of the layer directly adjacent to the core layer with different roughness displays information in the form of numbers, letters, geometrical shapes or images.

7. Data carrier according to one of the foregoing claims, characterized in that the adjacent layer consists of at least one thermoplastically processible plastic material, particularly polycarbonate (PC).

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8.   Data carrier according to one of the claims 1 to 6, characterized in that the adjacent layer consists of a paper-like material with at least one plastic laminated layer.

9.   Data carrier according to one of the foregoing claims, characterized in that the adjacent layer is imprinted.

10. Data carrier according to one of the foregoing claims, characterized in that the volume hologram is locally shrunk or swollen.

11   Data carrier according to claim 10, characterized in that the shrinking or swelling includes a gradient towards the data carrier surface.

12. Data carrier according to one of the foregoing claims, characterized in that the increasing roughness of the directly adjacent layer causes a shift of the wavelength of the image reconstructed by the volume hologram to smaller wavelengths (blue shift).

13. Procedure for the manufacturing of a data carrier with a core layer and at least one layer adjacent to the core layer, wherein the core layer consists of a holographic data memory in the form of a volume hologram, wherein the at least one layer adjacent to the core layer is laminated to the core layer, characterized in that the layer directly adjacent to the core layer is provided for lamination purposes with a surface facing the core layer, having a roughness, wherein the roughness causes a wavelength shift of the image that is reconstructed by the volume hologram.

14. Procedure according to claim 13, characterized in the average roughness for the wavelength shift of the image of at least 20 nm, which is reconstructed by the volume hologram, is equal to about 5 µm to 25 µm.

15.   Procedure according to one of the claims 13 or 14, characterized in that the roughness
       is obtained through a regular relief which is impressed in areas of the layer's surface via
       thermal and mechanical deformation prior to preparing the layers for lamination, which
       is placed directly adjacent to the core layer wherein the impressed surface directs
       towards the core layer.

16.   Procedure according to one of the claims 13 to 15, characterized in that areas of the
       surface facing the core layer of the layer directly adjacent to the core layer before
       lamination are generally smoothed out.

17.   Procedure according to one of the claims 15 or 16, characterized in that the areas have
       any geometrical forms and/or number forms and/or letter forms and/or image forms.